

ABSTRACT

A system and method for automatically reducing noise for video encoding is disclosed. In a simplified embodiment, the system utilizes a video input module and a motion estimation unit. The video input module is capable of performing the steps of:

5 filtering noise from currently received video data; combining the filtered data, wherein the combining step is dependent upon a category of the noise; and providing a weighted average of a current field derived from the combined filtered data and a prior field, wherein the prior field is derived from previously combined and filtered data that has been previously stored, the weighted average being determined by pixel motion between the

10 current field and the prior field. The motion estimation unit is capable of performing the steps of: separating a current video frame into multiple current regions of pixels and separating a prior video frame into multiple reference regions of pixels, wherein the prior video frame is derived from the previously stored data; and determining a first reference region within the multiple reference regions of pixels that is most like a selected current

15 region within the multiple current regions of pixels, the determination being utilized to determine the noise.